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## ORIGINAL DEPARTMENT.

### Communications.

#### Operation for Bow-legs by the Subcutaneous Section of the Tendons of the Musculus semi-membranosus and semi-tendinosus, with Cases.

By A. G. WALTER, M. D.

Of Pittsburgh, Pa.

The restoration of deformed knee-joint, under the name of "knock-knee," by subcutaneous division of the tendon of the biceps femoris, with subsequent gradual extension, having been noticed in a former communication, the opposite malformation, commonly called "bow leg," which is likewise owing to structural contraction of the tendons attached to the upper and inner part of the tibia, will next claim attention.

As the ankle-joint assumes different phases in its deformed condition, (the most frequent being varus and valgus,) produced by structural contraction of the antagonistic sets of muscles inserted into the foot, so the knee joint presents two prominent species of deformity: the one as "knock-knee," simulating that of *valgus*, which is of less frequent occurrence, the other of "*bow leg*," representing the deformity of *varus*, being more frequently observed. In the former the patient walks on the inner side of the feet, with the toes everted as in *valgus*, while in the latter the toes incline somewhat inward, the foot resting rather on its outside during locomotion. This analogy between the varieties of deformed knees and feet may be completed by comparing *pes equinus* to structural flexion of

the knee-joint, and *pes calcaneus* to that relaxation of the knee-joint backwards, which we notice in subparalytic limbs, and in the extreme grades of *pes varus*. Thus the four species of deformed feet find their representations in the four varieties of deformed knee joints, each of which depends on structural contraction of one particular set of muscles, overbalancing in their action that of the opposite ones, which in consequence of some traumatic injury, or of paralytic affection either complete or partial, have lost their natural function. There is another analogy between the deformities of the foot and the knee-joint not the less interesting, for knock knee like *valgus* is not as frequent as bow leg and *varus*, the malformation of the feet, however, being more numerous than those of the knees. Girls too are less frequently afflicted with this deformity than boys. Bow legs like *varus*, afflicting mostly both legs, is oftener congenital, while knock knee like *valgus*, one limb either alone suffering, or if both are affected, one showing the deformity in a more marked degree, is generally acquired. Flexion of the knee like *pes equinus* is mostly accidental, as is the bulging backwards of the knee joint and the corresponding deformity of *pes calcaneus*. At times, through rarely, bow leg and knock-knee are found in the same individual corresponding to the simultaneous affliction of *varus* and *valgus*, both being induced by accidental causes.

As in the deformity of the foot the tibia and fibula retain their natural position, while the foot is displaced, so in the malformations of the knee joint too, the femur remains stationary, while the crus is altered in its direction.

Thus guided by analogy between deformed

feet and knees, and inquiring into the causes and natures of the different species of deformed members we were led to adopt a *new* practice of restoring the knee-joint, ancient and modern surgery having failed to advise sufficient means of relief.

Having theoretically established this analogy between the different varieties of deformed feet and knees, practical illustration needs to be produced confirmatory of the soundness of theoretical reasoning.

*Knock-knees* having yielded to subcutaneous section of the biceps femoris, flexed knees having long been successfully restored by tenotomy, the bulging of the knee joint backwards will find its relief by imparting tonicity to the elongated flexor tendons, with subcutaneous section of the rectus femoris, (if structurally constructed,) and "bow-legs" will be remedied by tenotomy of the semi-membranosus and tendinosus, as the report of cases will prove.

In viewing the deformity of bow leg, while the patient is walking with his knees widely separated, the feet naturally approaching each other, toes pointing inwards, the outer edge of the foot firmly pressing upon the ground, the body swinging from side to side, while the lower limbs with knees stiffened describe a semi-circle, it will appear to be owing to unnatural outward curvature of the osseous femoris and cruris, rather than to any defect of the knee joint.

This apparent curvature of the bones, which to some extent, at times, at least in the tibia, is real without producing the deformity under consideration, and often disappears spontaneously, has no doubt been the cause of the nature of the deformity having so long been overlooked.

This being the condition in the erect position of the body, there appears but little prospect of relief, as no contraction of the flexor tendons is perceptible, (the knee joint merely making an outward curvature with its articular facets changed as the position of the joint would indicate,) and as attempts of redressing the curvature, by forcing the knee

joint inwards, completely fail. During flexion, however, all deformity disappears, the knees approaching each other naturally. In examining the limbs then in this position, the real nature of the case suggested itself; for when the knee joint is held flexed, and the head of the tibia semirotated from within outward, a grating in the joint is felt, and with it a conspicuous tension of the semi-membranosus and semi-tendinosus. This tension disappears again when the knee joint, while flexed, is allowed to resume its former semi-rotating position. *Semi-rotation therefore of the head of the tibia, inwards and backwards*, induced perhaps by the position of the limbs *in utero*, and followed by structural contraction of the flexor muscles, which are inserted into the upper and inner part of the tibia, and disconnected with any debilitating agency—the children's limbs thus affected generally begin fleshy,—is the essential cause of this deformity, which can only be remedied by tenotomy.

It may seem singular that in the *extended position*, being that, where deformity is apparent, the tension of the inner flexor muscles should *not* be detected, and that *during flexion* in which the curvature disappears, the resistance of the two flexor muscles becomes discoverable, but *only* by semi-rotating outwards the head of the tibia, which brings the articular surfaces of femur and crus into their relative natural position. Considering, however, that the amount of shortening of the implicated tendons is but small, it can only be made apparent, by placing the joint while flexed in its exactly natural position. By overlooking the semi-rotated position of the tibia, structural shortening of the inner flexor tendons will be sought after in vain, which however becomes palpable at the moment that the tibia is semi-rotated outwards, and its inner and posterior surface of the internal condyle of the femur,—the very reverse position of that in knock knee.

In bow-legs there is diastasis between the tibia and femur at the outer side of the knee-joint, while in knock-knee the opposite condition holds good. Children afflicted with knock-knees are liable to fall, those with bow-

legs are less so, as the knee-joints are held stiff in walking and running.

Orthopaedical means having been found powerless in redressing this malformation, section of a V-shaped piece from the upper and outer part of the tibia, like that put into practice for knock-knees by a European surgeon, may in aggravated cases be proposed. Few, *very few*, however, would be the patients willing to undergo the dangers and sufferings in consequence of it.

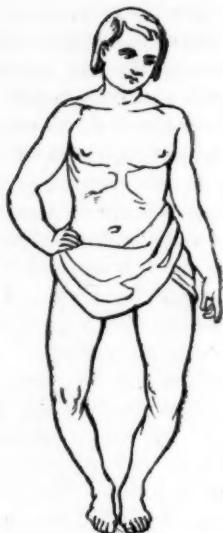
Tenotomy, however, entirely supersedes the necessity of any harsh or painful measures for the relief of the deformity, as the narration of the following cases confirmatory of the soundness of the above practice will plainly prove.

*Albert Gehrung*, a lad of 5 years of age, of Birmingham, Pa., born healthy, and thriving, soon began to show an unnatural curvature outwards of both lower limbs, which, increasing with his growth, became a source of great anxiety to his parents; though being persuaded that the deformity was seated in the shafts of the femur and crus, and would ultimately rectify itself. The little fellow grew tolerably active, his limbs however remaining curved, with the peculiar swinging motion of the body, its disproportion in size to that of the lower limbs, which were firm and fleshy, knees widely separated and apparently stiff, while the feet naturally approached each other. Having satisfied ourself that semirotation of the head of the tibia inwards and backwards, in consequence of structural contraction of the tendons of the semi-membranosus and semi-tendinosus, was the cause of the unnatural curvature of the articulation, those tendons were divided subcutaneously by a single puncture, above their insertion into the tibia, on December 13, 1858, a hollow cushioned splint was applied from below the groin to below the inner ankle, and confined there by a bandage from below upwards. No febrile reaction following, a few days after, gradual pressure by the turns of a roller was exerted upon the knee-joint, approximating it closer and closer to the splint. It was gratifying to

observe the steady painless yielding of the joint to the increase of pressure, which had been found unavailing without tenotomy, as the semi-membranosus and semi-tendinosus, not yielding to extension, would rotate the knee inwards and backwards, and thus bend the joint. At the expiration of two weeks, the articulation was restored to its natural line. A long pasteboard splint was then substituted for the tin one, which was confined to the limbs by a roller, and the patient allowed the use of his limbs. A few weeks later, an apparatus with a joint at the knee and ankle was then applied to his shoes. This was continued for five months, then left off by his parents, the deformity being effectually relieved. At the present date, the boy is very active, no trace whatever of any deformity being noticeable. The peculiar grating, so perceptible before the operation on rotating the tibia while the knee was held in a bent position, has entirely disappeared.

*George Porter*, of Pittsburgh, 6 years of age, well developed in body and limbs, when a few months old, appeared afflicted with excursion of the knee-joint to such a degree that the parents' apprehensions could not be allayed by medical persuasions. The limbs were bound up in splints which were kept on for many months, harassing the little patient without aiding in the least in the rectification of the deformity. The boy began to walk at the usual time, the curvature however with his growth increasing. Our assistance being requested, the ossa femoris and cruris were found normal. Semi-rotation of the caput tibiae in—and backwards, from rigidity of the inside flexor tendons of the knee being the cause of the infirmity. On February 16, 1859, these tendons were subcutaneously divided. Restoration of the affected joint was accomplished in three weeks, walking was then permitted, the limbs being supported by an orthopaedical apparatus. This was worn for 5 months, then discontinued, the limbs appearing normal. The deformity not having returned at present, the case must be considered complete.

GEORGE PORTER.



Before the Operation.



After the Operation.

*Alfred Koethen*, 4 years of age, of Allegheny city, a sprightly boy of unusual activity, was bow-legged from infancy. Numerous were the appliances which had been resorted to with the view of redressing the deformity. Disappointment, however, was always the result. Growing heartily and being unusually active, the knees became more and more separated, being nine inches apart in the extended position. He appeared diminutive, the body being disproportionate to the size of the lower limbs. Flexing the knee-joint removed the deformity, but it returned on the joint being extended; femora and crura being normal. Relief was speedily and effectually afforded by tenotomy of the tendo musculi semi-membranosus and semi-tendinosus, on January 7, 1859. The little fellow began to walk in 10 days after, and left off the apparatus four months later. His limbs being restored to their natural position, have remained perfect ever since.

*Peter Carson*, 6½ years of age, colored, of Pittsburgh, Pa., born bow-legged and scrofulous. Though not active, the deformity has nevertheless increased since. The knees are wide apart; cannot be approximated less than 8 inches; the left knee the most curved; the

ossa eruris and femoris more than usually bent. During flexion of the joint, the knees approach each other naturally, while during extension they again recede.

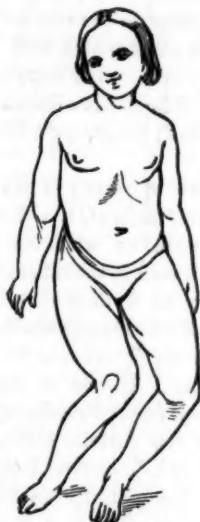
Tenotomy of the inner flexor tendons was performed on December 20, 1859, ether being used, the joint steadily and gradually afterwards yielding to gently extending force. A few weeks after, his limbs being bound up in a pasteboard splint, locomotion was commenced. The orthopsedical apparatus was worn for five months, being then no longer needed. The boy has walked well ever since, his limbs being restored to their normal shape, strength and usefulness.

*Frederica Gruber*, 3½ years old, of Pittsburgh, born well formed, though of serofulous constitution. Was sealed with hot milk on her breast, a year ago, cicatrization being tedious and protracted. Soon after, lateral deviation of both knees manifested itself, the right one as knock-knee, the left as bow-leg; the deformity gradually and steadily increasing. The right foot has assumed the appearance of valgus, the left one that of varus in its milder form. While walking she leans to her right side. Notwithstanding the extent of malformation of the lower limbs, she is able

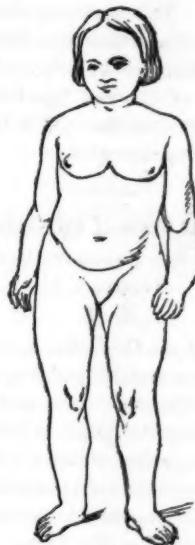
to walk, though falling frequently. On December 27, 1858, the tendo bicipit. femoris of the right limb, and the tendo semi-membranos. and semi-tendinos. of the left one, were subcutaneously divided; gradual extension was commenced a few days after, and continued for two weeks, when the natural line of the knee

joints being restored, a supporting apparatus was attached to her shoes, full liberty of walking being allowed. At the end of six months the support was left off, the joints being able to bear the weight of the body. She can now walk and run with ease and comfort, no vestige of the former deformity remaining.

FREDERICA GRABER.

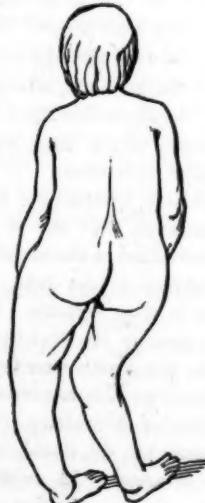


Before the Operation.



After the Operation.

POSTERIOR VIEW.



Such being the result of tenotomy, aided by subsequent gradual extension, speedily, painlessly and efficiently obtained, I feel gratified to proclaim its success in the removal of a deformity, alike disagreeable and burdensome, which modern surgery has failed to remedy. The more simple the means of relief and the more speedy of success, the greater are its merits. This tenotomy claims for the deformity under consideration. Speedy of execution unaccompanied by pain, and bloodless, prompt in its effects, and free from all risks, it is likely to remain *foremost* in the ranks of modern operative measures.

#### The present State of Ophthalmoscopy.

By MAX KUECHLER, M. D.

Of Newark, N. J.

No. 3.

*Opacities of the Crystalline Lens.*—In order to determine accurately pathological changes of the crystalline lense, the use of mydriatics, in order to dilate the pupil, is justified.

A complete lenticular cataract, be it hard or soft, becomes an object of ophthalmoscopy only in so far, as we can convince ourselves by the oblique illumination that there are no clear unopaque portions of the lens left. But of very great service is ophthalmoscopy in the earlier stages of cataracts.

From the concurring statements of Förster, of Breslau, who made dissections of seventy-two eyes with commencing opacities of the lens and Malgaigne, who made sixty, we have arrived at the fact, that cataracts generally, and especially those of old age, but very rarely commence in the centre of the lens, Förster having found only one purely central cataract, and Malgaigne none. Hence only the cortical and laminated cataracts are of special practical value to ophthalmoscopy.

Opacity of the cortical substance of the crystalline lens presents various forms. The radiate cortical cataract shows itself in rays curving around the equator of the lens, which appear the broader the farther and the more rapidly the disease has advanced.



This affection is best and most clearly recognized by the lateral illumination, and it can readily be seen where the various broad, opaque radii are imbedded in the clear substance of the lens.

Another pathological change of the lens consists of small punctiform opacities, appearing like drops in the cortical substance of the lens. On examination with the ophthalmoscope, they may readily escape the observer, but with the oblique illumination they become strongly marked, presenting a bluish or greyish color.

A third form of opacity of the cortical substance is surely present, if either by the oblique illumination, or with the mirror, three dark spots are seen in the otherwise clear lens. The arrangement of these dark spots permits us to determine accurately whether the opacity is situated in the anterior, or the posterior cortical substance. If two of these dark spots appear in a horizontal direction upward, ∵ the opacity is in the anterior cortical substance; if downward in a horizontal line, ∵ then the opacity is in the posterior cortical substance.

Two years ago I saw a case where these three dark dots, ∵ of the anterior cortical cataract, spanned as it were, a brownish film. This little film is so transparent, that



the back-ground of the eye may be seen through it with the ophthalmoscope, although it throws a light shadow upon it. I consider it as an opacity of the most superficial layer of the cortical substance.

The laminated cataract has its name from the circumstance that one or more opaque layers are imbedded on the surface, or elsewhere in the substance of the lens. The form of the laminae is very variable. Ordinarily but one lamina renders the lens opaque; Graefé, however, in the Archiv fuer Ophthalmologie, Bd. ii. Abtheil. p. 272, has described a double, and Mueller, of Aldenburg, (Mittheilungen aus der Praxis,) p. 66, double and even triple laminated cataract. In reference to their ophthalmoscopic examination, I will be allowed to quote the following from an article of

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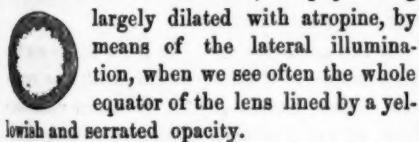
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Prof. Graefe, on the linear extraction of the lenticular cataract, Archiv, vol. I. Abtheil. 2. p. 236.

"In an ophthalmoscopic examination, the whole rounded margin of the opaque layer appears dark, sharply defined; when the light, however, strikes it perpendicularly, it appears in the central parts, provided the opacity is not too complete, brownish red, translucent, proving the translucency of its nucleus. An important ophthalmologic difference depends upon whether the cataract is stationary, or slowly progressive. In the first case, the cortical substance around the margin of the opacity is perfectly clear, so that we can generally see and examine precisely the objects in the fundus of the eye, although the field of illumination is more limited; while in progressive laminated cataract, the cortical substance is permeated by finely punctated, in short radiated opacities." This short description of Graefe sufficiently explains the ophthalmoscopic picture seen in these cases.

A further object in the ophthalmoscopy of the opaque lens is the so-called *arcus senilis lens*. This is to be examined, the pupil being



largely dilated with atropine, by means of the lateral illumination, when we see often the whole equator of the lens lined by a yellowish and serrated opacity.

Opacities of the posterior half of the lens are studied with the lateral illumination, while the eye is made to move in various directions. We then see the anterior portion of the lens clear and transparent, while the posterior half is either partially, or completely opaque.

(To be continued.)

#### On Hæmatine and its Detection.

By J. F. HELLER, M. D.

(Translated from "Zeitschrift der Aerzte" of Vienna, by J. M. Maisch, of Philadelphia.)

(Continued from page 307.)

*Detection of Blood and Hæmatine in Urine.* The color of urine is visibly changed by blood only in case its quantity has not been too small. In the sediment we may frequently find blood-cells without observing any red

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color. The blood-red color is strongly marked in urine which contains much urophæine, though by the addition of blood, we may be positive of its presence. On the other hand, we meet with urine or sediments possessing, from pathological causes, a blood-red color, which even the most experienced would be unable to recognise as arising from blood, without the aid of a chemical analysis. We have to mention, therefore, those cases in which the color of the urine or the sediment resembles that occasioned by blood.

It is particularly necessary to pay attention to the reaction with litmus, and to the specific gravity. We shall find that alkaline carbonates, particularly ammonia, change vegetable colors. Blood cells will dissolve in urine of low specific gravity, particularly if below 1.010, and cannot then be detected in the sediment by the microscope. The same is the case in such heavily pathological urines, when in retention of urine blood has been collected for some time, and macerated before it was excreted with the urine. I have observed this in scurvy, and in two cases of ruptura renum.

#### I. Detection of blood in urinous sediments.

The following red sediments have been observed :

1. In heavy, not red urine, blood cells.
2. Urate of ammonia or soda, colored red by urœrythrine.
3. Similar sediments of pus, with a small quantity of blood-cells.

4. In alkaline urine, pale or rose-red sediments, after the use of rhubarb, senna, santonine, logwood.

Ad 1. Sediments in hemorrhages, consisting only of blood cells, are never rose-colored, but always of a deep blood red. Under the microscope they are shown to consist either entirely, or mostly, of blood-cells. Their presence is shown chemically by the general reactions of hæmatine to be mentioned hereafter. They dissolve in distilled water, yielding a light red solution. The urine is albuminous.

Ad 2 and 3. These sediments are distinguished as follows : A little is boiled with distilled water in a wide test tube. The urates, with urœrythrine, dissolve with a yellow

color, and a rose-red precipitate is thrown down by sugar of lead. The sediment of pus remains turbid. Agitated with cold water, the filtered solution is red, and shows the reaction of haematin. Besides, pus may be tested for by potassa. If it is present, the red color is most likely caused by blood, inasmuch as pus-sediments contain but rarely urates and uricerythrine.

Ad 4. In the above cases, the earthy phosphates are precipitated from the alkaline urine, together with some of the pigment. It is readily recognized by acetic acid, which dissolves the sediment, forming a yellow color, which changes to red by ammonia. Collected upon a filter, the phosphates turn violet on exposure to the air. The red supernatant urine is rendered yellow by acids.

#### II. Detection of blood in urine.

The presence of iron in the ashes of the tincture obtained by acidulated alcohol, has so far been considered as sufficient proof of the presence of blood. I reject this test as unreliable, urophæine having the same behavior.

Urine may be colored red—

1. By dissolved blood; reaction acid, or alkaline.
2. By much uricerythrine; reaction acid, or alkaline.
3. By the pigment of rhubarb, senna, santonine, logwood; reaction alkaline.

Urine may be of a greyish brown, deep brown, almost inky color.

1. By macerated blood in presence of hydro-sulphate and carbonate of ammonia.
2. By blood and biliary coloring matter.
3. By decomposed biliphæine.
4. By much uroglucine and urrhodine; reaction alkaline.
5. By constituents of tar after embrocations of tar.
6. By much urophæine, besides uricerythrine, for instance in granulated liver.

The urine is subjected to the following tests :

1. It is tested for albumen, its absence excludes blood.
2. The coagulated albumen is allowed to settle; it is reddish or rust-brown if blood is

present, and the red color of the urine disappears, leaving a lighter or deeper yellow. If it does not contain enough albumen, some white of eggs is added. The dried coagulum is yellow, if free of haematin; brownish black, if even but little is present; this reaction was recommended by Francis Simon, and gives good results; the haematin may afterwards be extracted by acidulated alcohol.

3. The following very delicate test was observed by me. The urine is boiled in a test tube, and a concentrated solution of potassa is then added, which dissolves the albumen, and if haematin is present, produces a more or less bottle-green coloration. The heating is continued for a short time; the earthy phosphates are now precipitated together with the haematin, either floating on the surface or settling below with a brownish or blood-red color, which in the light frequently show a dichroism in green; after settling, the precipitate appears light blood-red, and under the microscope as a yellow amorphous mass. In a few days, the precipitate is again decolorized from above, by the further action of potassa, which likewise prevents the interference of any amount of albumen.

If the urine contains but little of the earthy phosphates, or if another liquid, such as vomitus, faeces, serous liquid, is under examination, an equal volume of normal urine is added to it, to supply the phosphates.

This test is very recommendable, particularly in cases where the haematin has become partly decomposed and lost its red color, or where it is mixed with biliphæine; likewise for the examination of liquids from abscesses, cysts, vomits, &c., in which from their appearance the presence of blood is not supposed.

The precipitate must not be confounded with a similar one, produced under the same circumstances, in urine, after the use of rhubarb, senna, santonin and logwood, in which cases, however, the green-red dichroism does not appear; the precipitates, particularly from rhubarb, turn violet in the air, and are readily dissolved with a lemon-yellow color, by acetic acid.

In case of the presence of much sugar, it is

well not to boil until the brown sugar reaction appears, but to agitate for a longer time; the liquid will then remain sufficiently light-colored for observing the reaction.

Heated upon platinum foil, ashes will be left containing oxide of iron, &c. Haematin is distinguished from uroerythrine by the above reactions, and containing more iron than the latter; both are precipitated by sugar of lead, with a rose or chamois color. On coagulating the albumen by heat, all the haematin is precipitated, but not uroerythrine.

5. The blood-red urine, after the internal use of rhubarb, senna, santonine and logwood, is rendered yellow by acids; in the first two cases, the red and yellow color may be repeatedly produced by alkalies and acids.

6. Urine which is brown from macerated blood, or from biliphæine, is treated as above; the precipitates of albumen and of the phosphates are to be tested for iron; a portion is to be tested for biliphæine.

7. Urine acquires—only when strongly ammoniacal—a greyish brown tinge by urrhodine with much uroglaucline; on being agitated with ether, this acquires a violet or purplish-red color by dissolving the urrhodine. The bluish-gray precipitate imparts to boiling alcohol the same color.

8. For urine containing much urophæine, and uroerythrine as in granulated liver, the precautions mentioned in 4, are necessary.

9. I have repeatedly observed a very dark brown urine after embrocations of tar; this is characterized by the absence of albumen, and by the odor of creosote and tar on mixing it with a sufficient quantity of concentrated sulphuric acid.

(To be continued.)

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The London Medical Review, a monthly, published by the Baillieres, has also made its appearance. The editorship is anonymous, an unnecessary concealment. In its reports on the progress of medicine, we are sorry to see that no credit is given to the sources whence the abstracts are derived.

## Illustrations of Hospital Practice.

### PENNSYLVANIA HOSPITAL.

Service of Dr. J. E. Meigs.

*Case of Jaundice, complicated with an Abdominal Tumor; Case of Chronic Diarrhoea; Importance of Rest and the Horizontal Position in Certain Diseases; Cases of Dyspepsia, Catarrh of the Intestinal Mucous Membrane; Oleum Chenopodiæ; Case of Sun-stroke; Case of Spinal Meningitis, Death, Autopsy.*

*Case of Jaundice, complicated with an Abdominal Tumor.*—(Aug. 8th, 1860.) James Carey, a seaman, 50 years of age, but a moderate drinker, was admitted into the Hospital, August 4th, 1860.

He had enjoyed good health up to September last, when he had intermittent fever for a period of about 10 or 14 days.

A week ago last Monday, he was taken with a chill in the afternoon, followed by fever, and the same phenomenon occurred for a succession of a few days. He became at once discolored, and had a pain extending from the lumbar to the right hypochondriac region. His bowels had been ordinarily regular, the color of the stools of a dark yellow, sometimes greyish tinted, but never clay-colored.

He voids, what is singular, about half a gallon of urine per day of a high color, like common red brandy.

His appetite is good, almost morbidly so; it is occasionally ravenous. The tongue is covered with a very slight yellowish fur, but otherwise presents no morbid characteristic, except that it is pale and anaemic. He has never had bleeding from the nose.

*Abdomen.*—On inspection, the abdomen presents no swelling, except that there is a little fullness to the right of the umbilicus. On palpation this fulness is found to be caused by a solid or semi-solid tumor in that region. It is of an oblong, somewhat pyriform shape extending with its narrow apex upward toward the margin of the ribs.

Percussion over this tumor gives a dull, perfectly flat sound. There is also well marked dulness under the xiphoid cartilage, and extending all the way around, two inches below the margin of the ribs on the right side. This is evidently caused by enlargement of the liver downward. Upward it is not materially enlarged. But besides this hepatic hypertrophy we have the tumor just alluded to. It was at first suspected to be caused by hard fecal accumulations, and with the object of determining the matter, suitable remedies, such as colocynth pills, were ordered on his entrance into the hospital. But although copious evacuations were produced,

and some hard faecal accumulations removed, still no diminution of the tumor has taken place, and it remains as before.

(Aug. 11th, 1860.) The patient had been taking, besides the colocynth pills, nitro-muriatic acid. His appetite is good, bowels open. He voided five pints of urine in 24 hours. The urine, on examination with the nitric acid test, showed the reaction of bile. His stools have become of a light yellow tinge; they are pretty solid and no longer ash-colored.

Although since the last visit a large amount of fecal matter has been brought away, still the pyriform tumor, quite movable, remains as before. There is slight enlargement of the superficial abdominal veins, especially the epigastric, on the right side.

From the persistence of the tumor, in spite of the copious faecal evacuations, and its general nature, the supposition, at first entertained, that we had to do with an accumulation of hard faeces, must be discarded. There remain hence but two suppositions. Either the tumor is formed by the largely distended gall-bladder,—distended in consequence of occlusion of the ductus choledochus communis, or it is a cancerous or scirrhus growth. The diagnosis lies between carcinoma and a distended gall-bladder with engorgement of the liver. Considering the enormous distension to which the gall-bladder would be subjected if it constituted the tumor, we should expect in that case almost entire obstruction of the ductus choledochus. This, however, is probably not the case, as is apparent from the appearance of at least a small amount of bile in the feces, which for the last few days, under the treatment adopted, has been slowly increasing. Again it has not the elastic, semi-fluctuating feel which a distended gall-bladder would present.

Yet it is difficult to believe it to be carcinoma. The tumor has evidently been existing for some months, without giving the patient much trouble.

He has not emaciated, has not lost much strength, and has been free from pain. Again, the tumor is not very hard, not nodulated or uneven, and presents none of the peculiarities, on feel, of carcinoma.

(August 15th, 1860.) Since the last clinic-day, it has been observed that the tumor regularly follows the movements of expiration and inspiration, rising with the former and sinking with the latter, and also that it is quite movable laterally on palpation. This obviously shows that the tumor must be connected with an organ influenced by the movements of the diaphragm during respiration, and from this circumstance as well as the shape and situation of the tumor, the assumption, after all, that it is a distended gall-bladder is very strong. The

case will be watched carefully and its further progress reported.

*Case of Chronic Diarrhoea.*—This patient, referred to in the last number of the REPORTER, was improving for a few days, when yesterday, in spite of orders not to leave his bed, he got up and walked about the ward for some time. This resulted in his becoming worse at night, having more passage, and feeling and looking feebler than before. There are ecthymatous pustules breaking out in his face, indicating a bad, faulty condition or dyscrasia of the blood.

Dr. Meigs here took occasion to refer to the exceedingly important matter of a perfectly quiet horizontal position, in many diseases, accompanied by debility of the system. It was a well known fact throughout the Southern States, where yellow fever prevails, that absolute rest, in a horizontal position, is of the greatest importance in this disease. Patients have been known to be rapidly advancing to convalescence, when they injudiciously got out of bed and walked about, and the result was a most rapid recurrence of the disease with its first violence, and speedy and sudden death followed.

The same remarks apply to persons, convalescent of continued fever. He referred to a patient, a child, ten years of age, who was rapidly recovering from an attack of fever, when one day, his mother having gone away, he got up, playing and romping about the room with his brothers. Two days after he had a most violent relapse. In another case of typhoid fever, which had lasted six weeks, and the patient fast recovering, he got up, walked a little while, had a relapse, and was sick three months. It is not only the exhausted condition of the nerve power, which renders exercise under these circumstances so very dangerous, but, the blood, being violently thrown into the smaller channels, causes a much more severe secondary metamorphosis or disintegration of the tissues, than the system can bear, and the secretions and excretions being not capable adequately to remove the results of that metamorphosis, its products accumulate in the blood and bring on the relapse. Again, the horizontal position and perfect rest is extremely important in puerperal women. Simply raising the head from the pillow has often brought on tremendous hemorrhage, syncope and death.

It is, then, a very important feature in the treatment of these classes of diseases, to pay the utmost attention to the horizontal position and perfect rest of the patient.

The patient is under tonic and stimulating treatment, and to restrain his bowels he takes plumbi acetas, tannin and opium.

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*Case of Dyspepsia.*—Several cases were shown. In cases of dyspepsia, which have resulted in chronic catarrh of the mucous membrane of the intestinal canal, and where there is complication with, or predisposition to intestinal worms, the oleum chenopodii is considered by Dr. Meigs as one of the most valuable tonics. It seems to modify that peculiar condition of the mucous membrane which predisposes to the development of helminthes, and to restore its tone. It may be given in doses of from 10 to 15 drops daily.

*Case of Sun-stroke.*—This patient, a young man, 19 years of age, was a few days ago occupied in tiling the roof of a building, and thus exposed to the excessive heat of the sun. Having been at work all morning, he went to dinner, and back to his work again; when in about an hour and a half his head commenced to ache violently, his eyes became dim, and he fell insensible. He was brought to the hospital in a soporous, almost unconscious condition, on the very verge of the grave. By brandy, water, and aromatic spirit of ammonia, and a turpentine and soap enema, reaction was brought about and he is now doing well, feels strong, and answers all questions perfectly intelligibly.

It is stated by the physicians in the East Indies, that uniformly in cases of sun-stroke, paralysis or irritability of the bladder is observed a day or two before the attack, causing the urine to be very scanty, and to dribble away in drops. The patient states that he has observed nothing of the kind in his case.

*Case of Spinal Meningitis.*—A young man, about 19 years of age, had been taken into the hospital some weeks after having received a violent blow on his loins. It hurt him badly, and he soon commenced to have tetanoid symptoms. It was impossible to determine whether there had been a fracture of one or more of the lumbar vertebrae, or bones of the hip, or not.

These tetanoid symptoms, however, gradually subsided, when severe neuralgic pain in the left shoulder set in, accompanied with typhoid symptoms tolerably well marked. There was epistaxis, marked meteorism and profuse diarrhoea. On looking over the case, and comparing its history and symptoms, Dr. Meigs came to the conclusion that it was a case of *spinal meningitis*, so ably described by Grisolle and other French physicians; a disease which has been frequently observed, and been closely studied and described by the army physicians of Algiers, where the disease has occurred repeatedly in an epidemic form. Although in this case it was of a traumatic nature, yet the symptoms resembled very closely those enumerated by the French authorities, of the epidemic form. As a characteristic

mark they mention a phlyctenoid eruption occurring abundantly on the skin in the advanced stage of the disease. This was present in this case, and exceedingly well marked.

The patient died suddenly in a convulsive spasm, and the *autopsy* verified the diagnosis.

No fracture of the spinal column could be detected. There was, however, a very large amount of pus found infiltrated through the iliac fossae in the psoas and iliacus muscles, extending up to the promontory of the sacrum. On opening the spinal column the characteristic lesions of well marked spinal meningitis were discovered. The lumbar vertebrae were not diseased, and with the exception, perhaps, of an apparent spot of softening, the medulla spinalis was in a normal state.

In reference to the lesions usually found in typhoid fever, none were present. The glands of Peyer were healthy, the lungs deeply congested, but crepitant.

## PHILADELPHIA HOSPITAL.

Service of Dr. Levis.

*Operation for Ankylosis of the Knee-Joint—Briement Force;—The New Operation for Varicose Veins.*

*Operation for Ankylosis of the Knee-Joint—“Briement Force.”*—John Thomas, aged 34, was recently admitted into the hospital in general good health, but disabled by an ankylosed knee.

He had been attacked with acute rheumatism early last winter, and laid continually with his leg in the position in which it is now bent. The joint has been entirely immovable for several months, and the leg is so much drawn up as to form an acute angle with the thigh. With the exception of the extreme contraction, the appearance of the joint is normal, and there is neither pain or tenderness on pressure. The condition appears to be that of complete or osseous ankylosis.

There has probably been an entire disorganization of the interior structures of the joint, and the plastic material originally exuded, as a result of inflammation, has become densely fibrous, and it would be inferred, from the solidity of the ankylosis, that this union has been strengthened by some osseous deposits.

It was determined to attempt the restoration of the limb to usefulness by an operation. The late success of some operations for ankylosis in Europe and this country, by forcible extension, induced the choice of this method, if found to be practicable. If, on application of a reasonable amount of force, without risking fracture of the femur, motion could not be started in the joint, some other operative procedure was to be resorted to.

On the 21st of July the patient was etherized, and Dr. Levis, grasping the leg and thigh, attempted, by steadily increasing force exerted with the hands, to break the adhesions. A loud snap at the joint indicated the first yielding. Before further procedure, as the flexor tendons were all resisting, they were all subcutaneously divided at the inner and outer hamstrings. Slighter force was again gradually applied, and with a crashing sound the joint yielded to a position but slightly bent. There was no blood lost, and no evidence of any injury by stretching or tearing the important structures of the popliteal region. The limb seemed sufficiently straight for progression with a stiff knee, which will probably result.

It was remarked that the entire division of the flexor tendons would, besides avoiding the tendency to retraction, prevent the extremely painful tension on the muscles, and consequent constitutional irritation which follow operations for ankylosis without such division. This seemed to be illustrated by the comfortable progress of the case.

The limb was placed in a well padded, slightly angular curved splint, reaching from the hip to the heel, and securely bandaged on it. After the patient aroused, and the limb became painful, one grain of sulphate of morphia was administered.

On the second day after the operation, the joint was tender on pressure, and the patient had some fever, and on the third day a slight diarrhoea. These symptoms were but temporary, and the patient since that time has continued comfortable. He is now, on the fifteenth day after the operation, going about the wards on a wheel-chair, still wearing the splint, and it is anticipated that he will soon be able to walk with but the support of a cane, and the limb be eventually restored so that he can resume an active occupation.

This case illustrates an instance of the tolerance of ankylosed joints to violent breaking of fibrous and osseous adhesions, and the painless progress of a case when the contracted tendons are divided.

*The New Operation for Varicose Veins.*—Sarah Robinson, aged 30, born in Delaware, had a varicose ulcer covering the inner portion of the lower third of the left leg. Surrounding the ulcer the skin presented the engorged dark red and shining appearance usual in varicose disease. Previous to the breaking out of the present ulcer, four months ago, her leg had been repeatedly ulcerated. Extensive enlargements of the superficial veins extend along the inner side of the leg and thigh, which she says first appeared during her first pregnancy, ten years ago. She is an active, intelligent woman, and complains of nothing but her limb.

The continued relief of the cases which have been previously reported as cured by subcutaneous liga-

ture with wire, insured the success of the operation in this case. With a straight needle the wire was passed beneath the vein, out through the skin on the other side, and returned between the vein and the integument through the original place of entry, thus surrounding the vein. Traction was then made on both ends of the wire, sufficient to compress the vein and arrest the circulation, and this was secured by twisting the wires. The same operation was repeated in other places. The ulcer was covered with a thick pledge of dry lint, and pieces of ielingus plaster placed over the ligatures.

This case has proved even more successful than those before reported, as the ulcer has almost entirely healed, and there remains no evidence of the previous varicose condition, except the discoloration around the cicatrizing ulcer. At the present time, twenty days after the operation, the wires encircling the veins, which were alternately of silver and iron, still remain, seeming to act similarly without producing any irritation. Daily pulling and twisting of the wires has been directed, to hasten their removal.

#### EPISCOPAL HOSPITAL.

Service of Dr. Kenderdine.

[Reported by Henry R. Tilton, M. D., Resident Physician]

*Amputation of the Penis for Cancer, no return of the disease in ten months; Amputation of both arms, fatty degeneration of all the tissues, secondary hemorrhage, recovery; Amputation of the thigh, great retraction of the soft parts, recovery; Vaginal fistula, operation, cure.*

*Amputation of the Penis for Cancer, no return of the disease in ten months.*—Wm. M., set. 66, entered the Hospital October of 1859, for a fungous mass surrounding the extremity of the penis, which in 18 months had increased from a small pimple near the frenum until it was as large as a moderate sized orange. The point of origin was the seat of a chancre, forty years before; there was no phimosis.

He had used the milder caustics, which gave him great pain and little benefit.

Upon consultation, it was decided to remove the organ, which was accordingly done by the écrasement, the skin having been pulled forwards and the chain gradually tightened.

About eight minutes were occupied in its removal, not a half teaspoonful of blood was lost, the part healed kindly, with a tendency to contract about the urethral orifice, which the occasional insertion of a bougie corrects; cold water was the only dressing. He still continues on the out-patient list, suffering from asthmatic attacks.

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Microscopic examination shows that it was the epithelial variety of cancer.

*Amputation of Both Arms; Fatty Degeneration of all the Tissues; Secondary Hemorrhage; Recovery.*—A. M., an American, aged 29, a printer by trade, was admitted June, 1859, for caries of the elbow joints. He was exhausted by the scrofulous discharges and by diarrhoea. After suitable preparation, Dr. Thomas resected the right elbow, with his accustomed skill. For a while the patient progressed favorably, but caries returning and the external tissues sloughing, Dr. Kenderdine, by the advice of his colleagues, determined to remove both arms, one immediately, the other as soon as practicable. One was removed in Oct. last, by the circular method, three inches below the shoulder, there was no retraction in the stump, either of skin or muscles. The whole surface appeared like the fat of boiled ham. All the tissues had undergone fatty degeneration; a result which, as Paget remarks, frequently happens in limbs long confined, owing to imperfect nutrition. There was great difficulty in severing the brachial, the ligatures repeatedly cutting through it from its fatty state. It was finally tied, as well as a number of others, the parts closed by adhesive strips and firmly bandaged. This stump did well.

In the second week afterward, the other arm was removed about the same place. In consequence of the irregular opening of the sinuses, a single flap was made from the outside of the arm. The tissues were in a similar condition as the first, and the same trouble with the artery. After securing the vessels, the flap was secured by sutures and bandaged.

Nothing of note happened until the 6th day, when secondary hemorrhage occurred. The patient lost about eight ounces of blood; the bleeding was controlled by pressure. In three weeks, the man was sitting in a chair, the first time for six months.

Union of the flap was remarkably slow, it remained month after month, and just laid in apposition with the edge of the stump.

During this present term, Dr. Thomas freshened the edges, and united them with the hare lip suture, and they seem now firmly closed.

He still remains in the House, as helpless an object as could be imagined, and a monument of what mutilation persons in his condition will bear.

*Amputation of the Thigh; Very great Retraction of the Soft Parts; Recovery.*—The following case presents a great contrast with the preceding, in regard to retraction.

A healthy boy, aged 11 years, was admitted in December last with the left leg mashed by a passenger rail car passing over it. As soon as reaction took place Dr. Kenderdine, assisted by Drs. Thomas and Fryer,

removed the limb by the circular operation. The parts were firmly drawn upwards, and fully three inches of flap left, so much indeed that it was considered excessive. The patient for several days suffered from traumatic delirium, which was quieted by opium, brandy, and beef tea. There was no sloughing; the stump was firmly bandaged, yet contraction took place to such an extent, that (though the bone would be covered) it was thought best to remove a small portion of the femur. The bone was cleared by pushing the muscles back with the handle of a knife, and about an inch removed. It healed rapidly, presenting a beautifully rounded end.

[Reported by B. E. Fryer, M.D., House Resident.]

*Vesico-Vaginal Fistula; Operation, Cure.*—Mrs. Letitia S., Irish, aged 36, of vigorous constitution, arrived at full term with her seventh child about eight months ago, and after a protracted labor was delivered by the forceps, since which time she has been annoyed by a vesico-vaginal fistula. The opening was about two inches behind the orifice of the vagina, the long diameter, (which was transverse,) about  $\frac{1}{4}$  of an inch, with several fibrous bands running to the vaginal walls.

By permission of his colleague, Dr. R. P. Thomas, she was admitted into the ward for diseases of females, and on August 1st, assisted by the attending surgeons and residents, Dr. Kenderdine performed the operation, as follows:

The edges were paired by cutting in such a manner that the mucous membrane of the bladder should not be injured, and the fibrous bands, extending to the vaginal walls, were divided. This stage of the operation was much prolonged by a profuse hemorrhage, which was found to come from a soft, fungous growth in the anterior lip of the uterus.

The hemorrhage being checked by tannin, and the clots removed by injections of ice-water, seven silver wire sutures were inserted, an extremely difficult part of the operation. The edges of the wound were then carefully brought together by the adjuster, and retained in position by perforated shot, firmly compressed upon the wire. The patient was then placed in bed, and one of Sims' self-retaining catheters inserted, having connected with its external end a tube of India rubber, to conduct the wire to a bottle, placed between the legs.

One-half grain of morphia was ordered, with  $\frac{1}{2}$  grain at night. She progressed favorably until the fourth day, when her abdomen became tympanitic and painful. She was ordered  $\frac{1}{2}$  grain of morphia with 5 grains of carb. potass. every three hours, and turpentine and laudanum to the abdomen. This promptly checked the peritonitis which was commencing, and on the eighth the sutures were removed. On the ninth day she passed her urine naturally, and on the eleventh left the hospital perfectly cured.

## EDITORIAL DEPARTMENT.

Periscope.

*Experiments on Trichinæ Spirales.*—At a recent session of the Academy of Sciences, in Paris, a communication by M. Virchow, of Berlin, was read, in which some experiments on the trichina spiralis were read.

Feeding a rabbit with meat containing the trichinæ, the animal begins to emaciate in the course of three or four weeks, loses its strength and dies towards the fifth or sixth week, after the ingestion of the meat containing the entozoa. If the muscles of the animal thus perished, are examined, they are found to be filled with millions of trichinæ, and there is no doubt that death took place in consequence of a progressive muscular atrophy, caused by the migrations of the trichinæ in the economy.

In the dog we can follow the development of trichinæ very well in the intestines; but they do not pass into the muscles, either because the intestines, or the digestive juices of the dog are noxious to the migration or final evolution of these parasites.

Prof. Virchow made these experiments with the muscles of a woman who had died under exactly similar symptoms as those which had been observed in rabbits, and in her case, the autopsy revealed nothing, except innumerable trichinæ in the muscles; neither in this case, nor in the rabbits experimented upon, could the parasites be detected by the naked eye.

From these observations Virchow concludes, that there are cases of fatal infection by trichinæ, that are discoverable only by the microscope.

From the observations of Prof. Zencker, under whose charge the case of the woman alluded to occurred, it appears that a month previously she had eaten pork, invested by trichinæ; the butcher who had slaughtered the animal, and eaten fresh trichinæ, as well as several other persons, became affected with rheumatic and typhoid symptoms, more or less severe; none died, however, but the woman.

From these facts it appears evident that the ingestion of raw or badly cured pork, containing trichinæ, exposes the eater to great dangers, and may be a proximate cause of death.

The trichinæ retain their vital power in decomposed meat, and resist for weeks an immersion in water. If they are encysted, we can, without destroying their vitality plunge them into a quite strong solution of chromic acid, for at least six days.

On the contrary, they perish and lose all noxious qualities, in well smoked ham, and kept a sufficient length of time before being consumed.

*The Use of Arsenic in Dyspepsia.*—Doctor V. Germain, de Château Thierry,) has recently laid before the Academy of Medicine in France, a memoir on the treatment of dyspepsia by arsenious acid, which is published in a recent number of the *Gazette Hebdomadaire*.

In looking over the chemical analyses of the mineral waters most celebrated for the cure of dyspepsia, Dr. Germain found that all, whose efficiency had been proven, contained traces of arsenic, and he arrived, after a careful examination of the matter, at the following conclusions :

1. While mineral waters are efficacious, those artificially prepared are without medical virtue.

2. The mineral waters cure various affections, but these cures are only secondary. Their first effect is an amelioration of the general health, following a restoration of the appetite, and of a good, sound sleep. The general system thus improved rids itself somehow, spontaneously, of the disease with which it was affected.

3. None of the substances held in solution in the mineral waters, if not iodine or iron, is capable of modifying the general health; and these two substances, administered pharmaceutically, do not produce the good effects of mineral waters, of which they form a natural constituent.

From these conclusions Dr. G. drew the further reference, that the inefficiency of the artificial mineral waters was owing to the absence of the arsenic, which in the analysis of natural waters is indicated as being present in traces; and that in the latter it was the arsenic, with its powerful tonic qualities, that restored the general health, cured the dyspepsia, and in that way removed a great many of those chronic ills for which those in easy circumstances seek and find relief at watering places.

Acting upon this theory, Dr. G. commenced to treat his chronic cases, in which dyspepsia played a principal rôle, with arsenic, in very small doses, and judging from his results, with the most happy effects. In the memoir, he adduces 18 cases of severe suffering, chronic ailments, with dyspepsia, which were readily and effectually cured, or relieved by this treatment, which we certainly consider worthy the attention of the profession.

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## EDITORIAL.

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## THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, AUGUST 18, 1860.

## A HIGHER DEGREE IN MEDICINE.

More than two years ago we entered, in the pages of this journal, which was then published monthly, into an earnest discussion of the status of the profession. This was done with the view of bringing to the notice of the profession a plan which we had been maturing for some time, which would eventually place under the control of the American Medical Association the standard of qualifications for a respectable standing as a practitioner of medicine in America.

We argued that there was no uniform standard of qualifications in our country, and in the nature of things, while the present plan was in vogue, there could not be, as each medical college had its own standard, and they were too much controlled by selfish interests to run much risk of sacrificing a few matriculants or diminishing their graduating classes, for any prospective good to the profession that might result from their adopting a higher standard of medical education.

We held that the title "*Medicinae Doctor*" per se gave not the slightest indication of the standing of a physician, inasmuch as our State legislatures were every year chartering medical colleges in which all kinds of medical opinions are taught, and whose diplomas are just as legal as those of the most celebrated institutions in the country. We protested against the American Medical Association attempting anything more in the way of reforming our medical colleges, believing that it was a useless expenditure of time, and proposed that it take the matter into its own hands, and adopt a standard of its own, and compel the profession to come to that.

Nor did we stop here, but presented a plan in detail to the Medical Society of New Jersey, one of the oldest medical organizations in the country, with the request that it be presented in the name of the Society, to the American Medical Association, and recommended for adoption. This was done at the meeting at

Washington city in 1858, when Dr. Lyndon A. Smith, as chairman of the delegation from the Medical Society of New Jersey, presented the "New Jersey resolutions," which, as they involved a change in the constitution, were laid over. At the next meeting at Louisville, they, with other matters involving the subject of medical education, were referred to a committee, of which Dr. Blatchford, of Troy, N. Y., was chairman. The spirit of the resolutions, and the plan proposed, met with the hearty approval of the committee, and some of the features recommended were incorporated into the able report presented by them at the meeting in New Haven this year. At this meeting the "second degree in medicine," emanating from the American Medical Association, was a topic of frequent conversation, and Dr. Frank H. Hamilton, of Brooklyn, N. Y., advocated it in some remarks made to the Association just before its final adjournment.

We are glad, too, to observe in a recent number of a New York cotemporary, that it has enlisted under the same banner, though it fails to do us the justice to allude to the origin of the proposed plan of giving the profession of the United States a uniform title that will prove a patent of respectability everywhere. Our cotemporary finds its remarks on the recent application of several graduates of homeopathic colleges in the United States, to the British Medical Council, to be registered under the clause admitting graduates of Foreign Universities. We can see no reason why the Council need to have been "in a quandary" in this matter, as a very little inquiry must have satisfied them that there is no "University" in this country that knowingly gives the title of M. D. to homeopaths; and if it is obtained by deception, the fact is evidence of fraud, and by the rules of all our universities and medical colleges, would disqualify the individual so offending from holding the title in the name of the university or college from which it was thus fraudulently obtained.

We repeat, that we are very glad indeed to find that a plan which we brought before the American Medical Association, not, we confess, without some misgiving that it would be

considered utterly impracticable, was not only entertained by that body, but that some of its features have already been adopted, with a fair prospect that its more important peculiarities will eventually become incorporated into the constitution of the Association. We are glad, too, of the evidence adduced above, that our plan is gaining able and influential advocates in the ranks of the profession and among our medical periodicals. A candid consideration of the subject can hardly fail to commend it to the warm support of our readers, and of all the medical periodicals of our country.

#### CURRENTS AND COUNTER-CURRENTS IN SURGERY.

The use of the metallic suture in the union of wounds is now generally understood by the mass of the profession, and its utility almost universally admitted. That its unirritating qualities and universal applicability in surgery should properly be claimed as a very recent *discovery*, is as evident; for notwithstanding the admitted assertion, that metallic threads were experimentally used in surgery even as long as three hundred years ago, *the fact that they did not come into general use proves that the real efficiency of the metallic suture had not, at that time, been really discovered.*

The first announcement of the success of the wire suture in some operations which were the test of its value, and the claim that it was destined to displace the ordinary suture from all surgical use, was received with an incredulity and opposition, which was favored by the apparently vaunting enthusiasm with which the claims for it were asserted. Surgeons were not prepared for a change in the suture. The use of ordinary threads, when sutures as a calamity seemed absolutely necessary, and the studied avoidance of them, and the substitution of adhesive strapping and bandaging, aided by the improved antiphlogistic treatment of the wounds—made any attempt to improve on the suture, seem a work of supererogation.

Had not the utility of the metallic suture been at once so uncontestedly demonstrated

by its success in the closure of cut edges, which all other sutures had failed to unite, and in the cure of conditions, which, until recently, the best surgeons of the world had agreed in abandoning as hopeless, its general adoption might have been longer delayed. In this city—to the progressive conservatism of which the profession incline for a determining verdict of the practical status of medical novelties—the acceptance of the wire suture progressed with caution, but received full opportunity for a thorough display of its merits. At this time we know of no operator among us so non-progressive as not to adopt the metallic suture in the union of wounds of every kind.

Until we turned the first leaf of a journal which now lies before us, we believed, or at least hoped, that not only had every prominent surgeon in Christendom rejoiced in possessing a means of generally producing the much desired immediate union of wounds, but that every practitioner, who is liable to be called on to perform the simplest operation, had determined on the metal-suture as the best method of securing a speedy closure of the wound.

Dr. John Watson, a Surgeon to the New York Hospital, in a clinical lecture on amputation, published in the *American Medical Times*, denies the unirritating quality and universal advantage of the metallic suture, and discards wire altogether for the ligation of vessels. He says that: "The great use of the metallic ligature in this; not that they are any better than silk, but because you can use a finer piece, and *the finer the suture, the less the irritation.*"

This manner of accounting for the efficiency of the wire suture can be sustained by no practical evidence. It has not been observed that fine wire is less irritating than thick wire; on the contrary, many operators, who use the wire suture extensively, prefer wire which is far from being very thin. Dr. Sims, of New York, now prefers in his plastic operations, wire that is comparatively thick, and which we believe, is thicker than that which he formerly used; and we recollect that Dr. Brainerd, of Chicago, lately attributed the support-

it edges, to unite, until re-world had general yed. In ermination of medical no-ture pro- all oppor-tunities. At among us the metallic very kind. a journal ed, or at very prom- d in pos- incing the wounds, liable to operation, are as the closure of the New on ampu- Medical lity and ture, and gination of great use of that they one can ture, the efficiency ed by ob-served thick wire; who use the which is s, of New operations, and which Dr. Brain- e supports

tion, which occurred in a wound that was closed by the metallic suture, to the thinness of the wire used. Mr. Simpson, of Edinburgh, does not select thin wire for his numerous and successful operations. In the Pennsylvania Hospital lead wire, which is necessarily made thicker than any other wire for suture, is now preferred as the least irritating, notwithstanding its thickness.

Dr. Watson also presents the following untenable theory of the action of wire suture in the now successful operation for vesico-vaginal fistula—a success which is too palpable for his denial:

"Its great use in the treatment of vesico-vaginal fistula, consists in the fact that but exceedingly small holes are made in the mucous membrane, and hence there is no chance for the escape of the urine into the vagina, a circumstance which would be very apt to occur if the ordinary silk suture was made use of."

The contrary of the above is the fact. A larger needle is required for the introduction of wire than is essential for thread of the same thickness; thus the holes are necessarily larger. But it was not the leakage through the suture holes that was the cause of failure in former vesico-vaginal operations, but the laceration around the ligatures, allowing them to yield and the fistula to re-open.

All that Dr. Watson admits for wire as a suture is its strength—that "if a fine wire is used we have more power than with thread." Now in those cases where the metallic suture is so indispensable, the tension is so slight that a silken fibre, finer than is ever used, would retain the apposition, and yet such a fibre, it is well known, will produce more irritation than even a thick wire.

The applicability of the metallic suture to the union of the parts after an amputation, could not be better illustrated than by a case of our own in the wards of the Philadelphia Hospital, in which the flaps were closely united by numerous metallic sutures, and the stump entirely bare, resting simply on a pillow without any dressing. Immediate union took place, and the sutures held their positions without irritation, and were finally removed

from the cicatrix at the expiration of four weeks.

As before stated, we consider the favorable appreciation of the metallic suture determined by the profession, and the credit of its practical introduction awarded to Dr. Sims. The practice of one surgeon in declining its use, will produce but a negative result, yet a published "clinical lecture on amputations," by a popular surgeon and teacher, which discards the well approved method of producing immediate union, should not escape some critical notice.

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It is with great pleasure that we lay before our readers another paper by DR. WALTER, of Pittsburgh, on a subject of great surgical importance—the successful employment of tenotomy in deformities of the knee-joint. In connection with his former paper on "knock-knee," published in the *REPORTER* of July 21st, the present one on "bow-legs" furnishes another of the hundreds of proofs daily coming before our eyes, that the science of medicine and surgery is, in spite of the denunciatory cries of "empiricism," rapidly approaching, in many of its departments, to that of an exact science. None can peruse Dr. Walter's paper without becoming convinced that a correct study of normal and morbid anatomy leads to exactness and positiveness in surgery; and we are convinced that a correct study of normal and morbid physiology will, as it has to a great extent already, in future lead to exactness and positiveness in medical therapeutics.

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### Correspondence.

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*Philadelphia, August 15th, 1860.*

MESSRS. EDITORS.—Many and varied are the troubles of and annoyances of a young physician. After having spent years of earnest toil, and probably nearly exhausted his pecuniary means, he locates himself and commences the realities of his profession. Commences? Yes, that is the word; he commences his profession, but very little of the *practice*; and hardly has the "shingle" nailed to the window of his cosey office, probably near the centre of the city, begun to show the effects of time,

ere he wishes that Prof. Hippocrates, whom they say was Dean of the Faculty of some old Greek Medical School at Cos, had never sent his circulars abroad to entice young men to espouse the cause of the "healing art divine," and that he (the young Doctor) had chosen some broader avenue, along which to reap the rewards of toil, for in the narrow one which starts from the Medical College, not a single flower dares raise its modest head to brighten his path, but is instantly choked to death by the rank and exhausting weeds of reality. Every bird that alights to sing him a conciliatory song is immediately affrighted from its perch by his headlong wish to satisfy the necessities that blasted the flower.

There is no popular error more fatal to the hopes of the young practitioner, or more calculated to cause him to use words, which probably never passed the lips of angels, than that which is emblazoned upon the domestic flag the world over—"with grey hairs only comes wisdom and sagacity." Thus the young enthusiast must have been many a weary mile upon his journey, must have been able to discern in the dim distance the snow-capped hills of the winter of his life, before he can hope for a recompense for the gushing waters of his youth left far behind him. This is sufficient—yea, more than sufficient to cast the damp sheet of discontent upon the ardor of an ordinary man, but, when such a genius as Prof. Holmes, of Harvard, affirms, in the face of the labors of the best men of many ages, that medicine is empiricism, and medication a humbug, then really the *artificial* physician must be mean in comparison with one of nature's own, of whose exploits the following is an instance.

A few months ago I was requested to watch at the bed-side of a colored woman, while she performed one of the noblest functions of her organization—the ejection of a new being upon this rolling sphere. For some reason the little one, when born, did not exhibit the ordinary phenomena of life. Maliciously happy for the opportunity, and with the instructions of Marshall Hall still burrowing in my brain, I proceeded at once to artificial respiration. The old nurse, an octogenarian negress, watched me for a few minutes with considerable interest, and then departed with the expression of contempt strongly stamped upon her countenance. She soon, however, returned with her lips more pouting than ever, and her buccal cavity distended to its utmost capacity with rye whiskey, which, in consideration of her benevolent mission, she was enabled, not without some spasmodic efforts, for once to keep from her stomach. With a significant movement with her closed hand, which could not be misunderstood, she requested me to stand aside; then seizing the child by both ankles, (wheelbarrow fashion,) she approximated its nearest orifice to her protruding lips, and

then gave a powerful, expulsive expiration—to me a primitive and novel method of administering an enema. Now, must not this act of the old negress, according to Dr. Holmes' views, be considered as the highest emblem of mother nature's curative instincts? using the very essence of the products of the field, that which had probably been food to her many years—in an essentially simple and natural manner, and discarding all ready methods and other "new fangled notions."

Sincerely yours,

JL

## News and Miscellany.

*Special Hospitals.*—A movement having been set on foot to found a Special Hospital for the treatment of stone and diseases of the urinary organs, in London, a number of the most prominent physicians of that city, among whom are Brodie, South, Latham, Watson, etc., have published an address in the *Lancet* objecting to this, and expressing their opinion on special hospitals generally, as follows:

The practice is injurious. First, because in the maintenance of numerous small establishments the funds designed for the direct relief of the sick poor are wasted in the useless multiplication of expensive buildings, salaries, and hospital appliances, and in the custom of constantly advertising to attract public attention.

Secondly, because the public is led to believe that particular classes of disease can be more successfully treated in the small special institutions than in the general hospitals—an assumption directly contrary to evidence; the fact being that the resources of the general hospitals are in every respect superior to those of the special institutions alluded to.

Thirdly, because it is essential for the interests of the public, with a view to the efficient education of students preparing for the practice of the medical profession, that all forms of disease should, as far as possible, be collected in the general hospitals to which medical schools are attached.

Dr. Jarvis, of Boston, was present as a member at the late International Statistical Congress. He recommended that the Superintending officers of lunatic asylums in all countries publish their reports on a uniform plan. A timely suggestion.



## ADVERTISEMENTS.

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#### REFERENCES.

JOSEPH PANCOAST, M. D., Professor of Anatomy at the Jefferson Medical College, and Surgeon to the Pennsylvania Hospital.

D. HAMILTON, M. D., Lecturer on Anatomy, and Surgeon to the Philadelphia Hospital.

ADDINELL HAWSON, M. D., Surgeon to Wills Hospital.

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Also to the editors of this journal.

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